

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Application of San Diego Gas & Electric Company  
(U 902 E) to Extend and Modify the Power Your Drive  
Pilot Approved by Decision 16-01-045.

A.19-10-012  
(Filed October 28, 2019)

**COMPLIANCE FILING OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) OF  
INDEPENDENT AUDIT REPORT PURSUANT TO DECISION 21-04-014**

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January 31, 2022

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Pursuant to Commission Decision (“D.”) 21-04-014 (the “Decision”), ordering paragraphs (“OP”) 8 and 9 (pp. 98-99), San Diego Gas & Electric Company (“SDG&E”) hereby submits the independent audit report as Attachment A hereto.

**I. BACKGROUND**

OP 8 of the Decision (p. 98) requires SDG&E to “contract with an independent third party to audit SDG&E’s Power Your Drive Pilot costs,”<sup>1</sup> and OP 9 (p. 99) requires SDG&E to file and serve the final audit report on the A.19-10-012 service list within 120 days of issuance of the Decision.

To comply with OPs 8 and 9, SDG&E submitted Advice Letter (“AL”) 3783-E (June 8, 2021) to request approval of SDG&E’s selection of an independent third-party consultant and scope for an audit of SDG&E’s Power Your Drive Pilot. The Commission approved AL 3783-E effective July 8, 2021. Under the Decision and the approved advice letter, the subject audit report was to be filed by August 13, 2021.

Upon approval of AL 3783-E, SDG&E retained the independent third-party consultant, PricewaterhouseCoopers LLP (“PwC”). By letter dated July 22, 2021, pursuant to

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<sup>1</sup> D.16-01-045 approved the Power Your Drive Pilot.

Commission Rule 16.6, SDG&E requested an extension of time to file the audit report to December 10, 2021. This request was granted by the Executive Director on August 13, 2021. By letter dated November 19, 2021, SDG&E requested a second extension to file the final audit report to January 31, 2022, which the Executive Director granted by letter dated December 7, 2021.

## **II. CONCLUSION**

SDG&E requests that the Commission accept the audit report at Attachment A hereto in compliance with D.21-04-014, OP 8 and 9.

Respectfully submitted,

/s/ E. Gregory Barnes

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January 31, 2022

# **ATTACHMENT A**

**Final Report Pursuant to D.21-04-014, OPs 8 and 9**

# SDG&E Power Your Drive Pilot Assessment

January 28, 2022



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# 1. Scope of the report

PricewaterhouseCoopers LLP (“PwC”) was engaged by San Diego Gas & Electric (“SDG&E” or “the Company”), a wholly owned subsidiary of Sempra Energy, to perform an assessment (the “Assessment”) of SDG&E’s Power Your Drive (“PYD”) Pilot program as ordered in California Public Utilities Commission (CPUC) Decision 21-04-014 dated April 15, 2021 (the “Decision”). The scope of the Assessment was mutually agreed upon from discussions between SDG&E and the CPUC’s Energy Division.

This report includes:

- Background on the PYD Pilot program,
- A summary of results and findings from the Assessment, and
- Observations and recommendations from the Assessment for the purpose of informing the April 2021 approved extension of the program (“PYD2”).

## Limitations & Assumptions of the Assessment

Our work was performed based on the information provided to us by the Company and statements made by Company personnel. We did not audit, verify or otherwise validate any underlying data or statements. Additionally, our engagement cannot be relied upon to disclose errors, irregularities, or illegal acts including fraud or defalcations that may exist.

Our Services were performed and this Deliverable was prepared for the sole use and benefit of SDG&E. SDG&E may disclose this assessment report, or discuss information relating to the Services, with any governmental authority, agency or regulator (“Regulator”) with jurisdiction over Company; provided that the Company provides PwC advanced written notice of such disclosure. The Company acknowledges and agrees that: (i) PwC’s Services were not performed, and our report was not prepared, for any Regulator, and (ii) any such disclosure to a Regulator is for informational purposes only and not for any third party’s use, benefit, comfort, or reliance.

PwC performed the procedures in accordance with the Standards for Consulting Services promulgated by the American Institute of Certified Public Accountants (“AICPA”). Therefore, PwC is not providing an audit, accounting, or attest opinion or other form of assurance. As part of our procedures, PwC performed factual analyses and procedures, and documented the findings and results from such analyses and procedures, including PwC’s observations and related recommendations.

Our procedures were limited as a result of the following factors:

1. A number of key individuals from the PYD Pilot were no longer employees of the Company by the time our assessment was performed,
2. The PYD Pilot had significant turnover of key personnel during the pilot, and
3. Given the passage of time since the execution of the pilot (most activities occurred between 2014 and 2019), certain materials (e.g. emails and other documents) which may have provided additional information were not available and certain individuals were not able to recall all relevant details of the program which may have enhanced our understanding of the program.



## 2. Qualifications of PwC

PricewaterhouseCoopers, which was formed in 1998 from a merger between Price Waterhouse and Coopers & Lybrand, has a long history in client services that dates back to the nineteenth century. Both firms originated in London during the mid-1800s. Today, we serve 26 industries including the Utilities and Sustainable Energy sector. Our industry-focused services in the fields of assurance, tax, human resources, transactions, performance improvement, information technology and crisis management have helped resolve complex client and stakeholder issues worldwide. Our US firm, comprised of over 55,000 professionals, shares one purpose—to build trust in society and solve important problems—which is at the core of everything we do. It guides how we serve our clients, our people and the world. To help our clients build trust and deliver sustained outcomes, PwC provides professional services across two segments: Trust Solutions and Consulting Solutions. Within these segments we bring a range of capabilities to help organizations solve faster, solve more and realize more value. These capabilities include cloud and digital, deals, ESG, cybersecurity and privacy, governance/boards, risk, transformation, tax services and much more.

### **PwC's Utilities and Sustainable Energy Practice:**

Nationally and globally, we are a leading provider of services in the utility industry. Our philosophy in serving the utility industry is to employ dedicated resources who focus on utility industry clients. This integrated practice demonstrates our commitment to the convergence of the utility industry and enables us to provide worldwide access to information through a variety of local resources. Our depth of resources and range of experience is enhanced by our strong base of utility clients. In the United States, we are the public accountants or consultants for more than 400 clients in the electric, gas, water, and renewable (green) energy sectors.

Our Utilities and Sustainable Energy practice provides professional services to companies of many sizes, across many segments of the industry. Our US practice consists of more than 1,400 professionals including a dedicated utilities team within our National Office. We are one of the few firms with fully integrated industry resources across all three lines of service (Assurance, Tax, and Advisory), and these relationships enable us to take a broader look across the sector to identify leading practices, common issues, and other insights.

### **Complex Accounting and Regulatory Support Practice:**

Within our Utilities and Sustainable Energy industry team, we have a smaller, highly specialized group, the Complex Accounting and Regulatory Solutions practice (CARS). Our CARS practice is dedicated to helping regulated companies in the energy and utilities industries manage their regulatory risk and solve complex accounting problems. Our seasoned team has deep experience working with regulated entities. The individuals in our CARS practice have many years of experience serving rate regulated entities.





### 3. Executive summary

We were engaged by SDG&E to perform an assessment of SDG&E's PYD Pilot program. As part of this engagement, we interviewed key members of the Company and reviewed documents relevant to our engagement. Pursuant to and following within the scope contained in the Decision, our approach to conducting the Assessment involved the following activities:

1. Perform an analysis / assessment of the drivers of SDG&E's cost overruns related to the PYD Pilot:
  - 1.1. Provide an information and documentation request list
  - 1.2. Gain an understanding of relevant SDG&E processes, control procedures, and systems related to the PYD Pilot
  - 1.3. Interview key SDG&E operational, regulatory, and finance personnel to gather factual information regarding SDG&E's PYD Pilot
  - 1.4. Analyze relevant regulatory orders associated with the PYD Pilot
  - 1.5. Obtain and analyze SDG&E's internal cost build-up of "per port cost"
  - 1.6. Obtain and analyze the initial PYD Pilot financial budget (including details of fixed and variable costs)
  - 1.7. Evaluate variances in the actual financial results of the PYD Pilot vs. the financial budget (i.e., size, nature of variance, and potential underlying driver(s) of the variance) based on PwC's knowledge of current industry practices and the requirements included in the applicable order
2. Assess the design of SDG&E's accounting practices and procedures for the PYD Pilot:
  - 2.1. Read and analyze SDG&E's written policies, procedures, and controls documentation relevant to the PYD Pilot
  - 2.2. Interview key SDG&E Accounting / Finance, Financial Planning & Analysis and Budget personnel
  - 2.3. Inspect internal management financial reporting for the Pilot (over the Pilot period) based on PwC's understanding of the financial reporting requirements and knowledge of current industry practices
3. Assess the design of SDG&E's internal PYD Pilot management procedures and oversight:
  - 3.1. Read and analyze SDG&E's written policies, procedures, and controls documentation relevant to the PYD Pilot
  - 3.2. Interview key SDG&E operations / management personnel to gather factual information regarding the management and oversight of the PYD Pilot
  - 3.3. Inspect internal management operational reporting for the PYD Pilot (over the Pilot period) based on PwC's knowledge of current industry practices
4. If necessary, provide observations and high-level recommendations that may lead to potentially lower costs for PYD2:
  - 4.1. Evaluate the results of procedures performed above. Based on the results / observations from the procedures performed, provide high-level recommendations of opportunities (if necessary and applicable) that may aid in lowering SDG&E's costs for the PYD2 program
5. Using publicly available data, compare SDG&E's per port cost for the PYD Pilot to other utilities outside California.

As a result of our procedures, we have identified areas within the PYD Pilot program that caused or contributed to the overrun of costs and have provided recommendations for the Company to apply prospectively that may aid in lowering SDG&E's costs for the PYD2 program. Please see the body of this report for further discussion of these considerations.

## 4. SDG&E PYD pilot background

### 4.1 Overview of Program

The CPUC approved the PYD Pilot program in January 2016 and authorized SDG&E to install up to 3,500 electric vehicles (EVs) charging stations at approximately 300-350 EV host sites with a total approved spend of \$45 million. This is in comparison to SDG&E's original proposal of \$103 million for the PYD Pilot program to install 5,500 ports across 550 sites. In addition, the CPUC approved a three year program sign-up period and a fourth year to conclude implementation/construction. This is in contrast to the Company's proposed four year sign-up period and four to five year installation period. The infrastructure developed during the program was to be owned, operated, and maintained by SDG&E. The PYD Pilot program introduced an hourly time-variant rate and associated grid-beneficial charging infrastructure for EVs to better determine the benefits to all customers of efficient integration of EV charging loads with the grid. The Company has described the EV Pilot Program in California as a "first of its kind" program which appears to be supported by the discussions with SDG&E and the benchmarking that we performed (see section 5.1.5 below). It appears that based on the procedures we performed, extensive utility owned EV charging infrastructures on customer premises was not common in 2014 and continues to be limited to this day. SDG&E noted that this limited its ability to base the program budget on actual costs figures from similar projects. We also observe that on page 25 of the Decision, the CPUC provided its guiding principles for the Pilot. Item 8 in this list states, "Must incorporate learning-by-doing and make adjustments to the VGI pilot program as needed". As a result, the Company informed us it was expected that there would be lessons learned as a result of this Pilot program.

In October 2019, the Company submitted an application for an extension of the program and in April 2021 the CPUC approved SDG&E's PYD2 program to install up to 2,000 EV charging stations at approximately 200 EV host sites over a two year period for a total estimated cost of \$43.5 million, PYD2.

### 4.2 Customers

The PYD Pilot program targeted installation of charging infrastructure at workplaces and multi-unit dwellings ("MUDs") which offer around-the-clock opportunities for grid-integrated charging for potential EV customers who currently may not have convenient access to charging facilities. The program had goals to reach at least 40% of installations in MUDs and to deploy installations in areas that have higher than average levels of pollution by setting a target of at least 10% of installations in designated disadvantaged communities ("DACs").

The PYD Pilot program used the following three primary criterion to determine which customers would be a good fit for the program:

1. Customer In-Take and Fit for Program
2. Site Feasibility for Cost Management
3. Site Agreement (Easement, License Agreement, or Use and Occupancy Permit)

Additionally, the following items were utilized by the Company to prescreen potential customers for the program:

1. A site agreement is necessary to secure the required land rights to install the EV charging infrastructure on private property. Exempt are certain municipal, governmental or quasi-governmental agencies (e.g., Port of San Diego, San Diego County Regional Airport Authority) accounts;
2. A site walk engages several areas of expertise to create the best possible EV charging station design solution for the site host and the program; and
3. An electronic EV Survey is required as part of the site pre-screening process to poll EV driver demand-current and future. EV survey results were reviewed to indicate how many ports were recommended for a given site.

MUDs, including apartment/condo buildings, require a minimum of at least 5 parking spaces to dedicate to EV chargers, while workplaces had to dedicate at least 8-10 spaces.

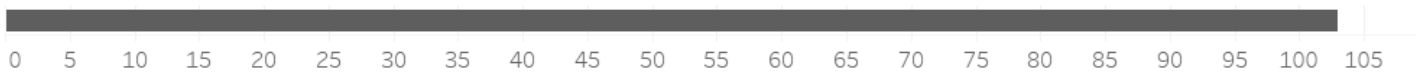
Customers that participated in the program were assessed a nominal one-time participation payment unless the site is within a designated disadvantaged community, in which case, the participation payment was waived. SDG&E coordinated the design, permitting, construction, and commissioning of the charging stations. Once drivers began charging at installations under the program, SDG&E handled the billing, provided customer support, and all maintenance for the charging equipment.

Given that this was a pilot program, customer identification and selection was one of many areas where the Company needed to develop its processes, tools and infrastructure as the program progressed. As discussed below, the Company leveraged a third party to assist with the building of this process.

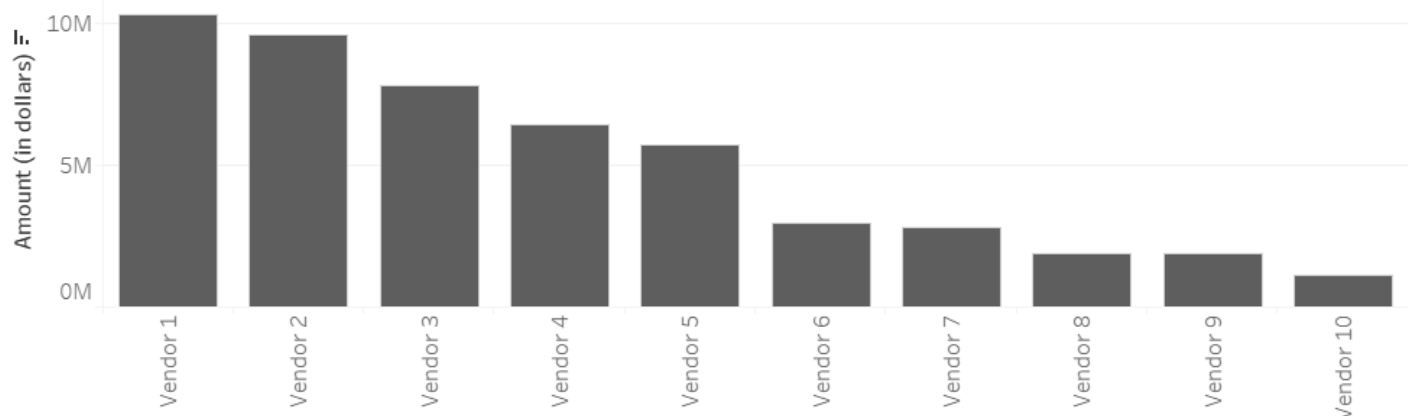
### **4.3 Vendors**

Under the program, SDG&E contracted with third parties to build, install, operate and maintain EV charging facilities under a service level agreement, to SDG&E's Vehicle Grid Integration (VGI) specifications, and under SDG&E's overall supervision. The PYD Pilot program engaged 103 vendors to support the different program phases, activities, and system updates due to the size, complexity, and deadlines of the project. SDG&E initially assessed that the Company did not have the resources or specialized personnel to oversee and manage the project and contracted a third-party vendor ("Program Management Vendor") to support many aspects of the projects, including project management, customer outreach and tracking, site engineering and design, and construction oversight. Program management of third-party resources, including external vendors and contractors, evolved over the maturation of the PYD Pilot program. Over time, these program management functions transitioned from being managed by the Program Management Vendor to internal Company resources. Refer to section 5.1.4 of this report for further discussion on our findings regarding the Program Management Vendor's involvement with the PYD Pilot.

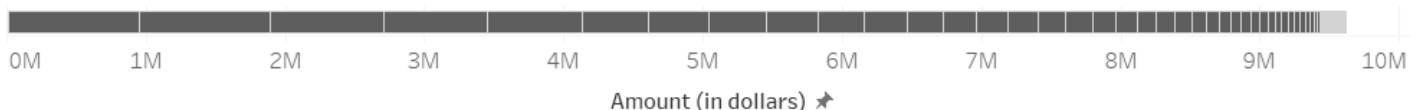
## Number of Vendors



## Top 10 Vendors



## Spend from Remaining Vendors (93 vendors)



SDG&E's supply management group conducted sourcing efforts in conformance with SDG&E's Procurement Policy. Requests for proposals were issued and managed via PowerAdvocate (SDG&E's procurement system), an evaluation and selection matrix was created, vendor/contractor responses were evaluated against the matrix, and vendors were selected based on scoring in the selection matrix. Agreements were then negotiated and put in place with the awarded contractors. All procurements were documented in PowerAdvocate and the Supply Management Enterprise Contract Management (ECM) system.

Once a project had 100% design plans (final engineering design), it was issued for bid. Three construction contractors were primarily utilized for the program. Projects were awarded based upon area of specialty and price. Vendors were paid by SDG&E at the completion of the project (a one-time payment) after all required paperwork was completed. Each site was assigned a unique purchase order (PO) and work order (WO) for cost tracking purposes.

### 4.4 Budget

Within the Decision noted previously, the CPUC approved a total budget of \$45 million for the PYD Pilot program compared to SDG&E's requested budget of \$103 million to install 5,500 ports across 550 sites. The Company notes that the costs of the program were attributable to five main cost components of installing a VGI system. The Company notes that these cost components vary from site to site depending on the work needed and conditions at each site:

- The engineering design and permitting of the selected site host,
- The new electric service that will be separately metered by SDG&E,

- The Electric Vehicle Supply Equipment (provides for the safe transfer of energy between the electric utility and the EV) and installation costs,
- The access control equipment and installation costs, and
- The compliance with the Americans with Disabilities Act in terms of parking modifications and signage.

Within the budget, in addition to the site costs, SDG&E estimated that the one-time VGI information technology costs to be approximately \$1.6 million. These costs were composed of software development, hardware costs, and phone and web applications.

The Company incurred a total cost of \$70.3 million for the PYD Pilot program; thus, exceeding the budget authorized in the Decision by \$25.3 million.

As part of the Company's monitoring and analysis of the PYD Pilot budget, cost categories were established and estimated across the program for the assumed scope of work. Each month, after the accounting system closed, actual costs were mapped into these categories with commentary provided as needed. The program's forecast was then reviewed by the program manager and updated each month to incorporate the most up to date program assumptions. The Company prepared monthly "Flash Reports" to review budget to actual comparisons on a monthly and YTD basis. The "Flash Reports" were prepared at a high level which included a monthly budget to actual comparison for CapEx, AFUDC, and Operation and Maintenance (O&M) costs. The reports were reviewed by project managers, directors and vice presidents within the SDG&E Clean Transportation department. See Appendix B for an example of the "Flash Report".



# 5. Results and findings

## 5.1 Summary of findings

Below is a summary of PwC's findings based on the results of our Assessment. As described further below, we have categorized the findings based on the nature of our finding.

### 5.1.1 Approval of initial budget

In the Company's initial filing to the CPUC (Application No. 14-04-014, filed April 11, 2014), SDG&E proposed a budget of approximately \$103 million for the PYD Pilot program to install 5,500 ports across 550 sites. Approximately \$65 million of this cost was anticipated to be incurred during the sign-up and installation period and authorized up front. The remainder of the cost recovery related to the long term O&M expenditures that would be sought by the Company in future general rate case proceedings. In the final Decision by the CPUC, the Company's proposed budget was denied and the CPUC approved a final budget of \$45 million for the PYD Pilot program and lowered the number of ports and sites to 3,500 ports across 350 sites. During our interviews with the Company, it explained that the revised budget that was approved by the CPUC reduced the total number of ports/sites to be installed, but did not reduce the budget on a pro-rata basis and did not appropriately reflect the amount of fixed costs included within the Company's proposed budget that would not vary based on the number of sites/ports included in the program. While acknowledging that the Company understood and agreed to the terms of the Decision and elected to go forward with the PYD Pilot program with the approved budgeted amount of \$45 million, through our interview discussions, the Company noted that completing the program within budget would be challenging. The Company also informed us that they ultimately decided to accept the budget due to a desire to help the State meet its EV charging and adoption goals and the strategic importance of the program to the Company's future business. The approved budget being so much lower than what the Company believed was appropriate presented an early risk to the program that the Company seemed to not have developed an appropriate response including a mitigation plan. As noted further in section 5.1.2 and 5.1.3 of this report, the Company appears to have lacked an appropriate process for identifying the risks to the program and developing a suitable mitigation strategy inclusive of approvals from management and suitable monitoring. Further, we would have recommended the Company attempt to engage in discussions with CPUC Staff during the Pilot in an effort to increase the transparency of the forecasted results of the project prior to completion. This would have been particularly beneficial as it became evident that the Company's original per port cost estimates were closer to the actuals than the approved budget and increasingly likely that actual costs would exceed the approved budget by a significant amount. While the Company made its semi-annual required filings with the CPUC, no party highlighted the potential cost overruns in a timely fashion such that contemporaneous discussions could be held.

### 5.1.2 Nature and complexity of program

The Company did not have prior experience with such a program nor were there peers with such experience to leverage. These factors resulted in the Company discovering certain complexities that became apparent as the program progressed. In SDG&E's application to the CPUC for the PYD Pilot program, a 10% contingency was identified and requested (see CPUC Application 14-04-014, Prepared Direct Testimony – Chapter 2 (April 11, 2014) at page RS-14). However, as noted above, the total budget was reduced in the final approved CPUC Decision. While the reduction was not attributed to any specific components of the budget, it appears this reduction had the impact of reducing and/or eliminating this contingency that may have been able to absorb some of these unforeseen complexities.

Some of the complexities noted by the Company included:

1. **IT Costs:** During the IT initial design, but after having received the approved budget within the Decision, SDG&E identified that the effort needed to establish an adequate IT backbone to deliver on the program requirements would be greater than was originally expected. Based on review of the PYD transactional costs incurred in 2016 provided by the Company, costs were primarily related to IT set-up costs. In particular, we noted that testing and vendor qualification activities were not estimated for during the filing. This led to an overrun of IT costs totaling \$2.4 million. The omission of testing and vendor qualification costs in the original budget indicates a failure in the Company's budgeting process.

During the duration of the program, the IT budget was monitored on a monthly basis. On a monthly basis, the budget to actuals were reviewed in meetings attended by the IT Project Manager, other Project Managers, and IT Directors. Overruns were discussed and approved via these meetings or subsequently through emails or verbal communication. The budget was updated on a quarterly basis as needed to adjust the estimated completion amount. The Company asserted that these IT costs represented a one time cost during the PYD Pilot program. These costs are fixed costs that can be utilized for existing and new programs going forward. While a proper review and approval process was in place to assess and address overruns, the Company noted that the overruns in IT costs were related to costs unaccounted for in the original budget.

2. **Site Selection:** The Company noted that thirty-nine percent of PYD Pilot sites are MUDs compared to the Decision's forty percent target. Further, thirty-one percent of PYD sites are located in DACs, exceeding the Decision target of ten percent. It is reasonable to conclude the PYD Pilot's utility end-to-end ownership model likely increased MUD and DAC participation by reducing risk for property owners. The risk of construction cost overruns and incurring future maintenance costs may have discouraged property owners from participating in other charging pilots which did not offer full utility ownership of the EVSE. This is in contrast with the SDG&E program which had the utility absorb these risks. Our interviewees noted that throughout the course of the PYD Pilot, SDG&E worked to increase MUD participation. During the initial months of deployment, SDG&E was not on track to meet the Decision's forty percent MUD deployment target. In response, SDG&E issued a request for proposals for external outreach and support services and a MUD market assessment. While securing these external resources added to Pilot costs, the Company determined they were necessary to meet the MUD target. SDG&E also initially set a ten port minimum for PYD Pilot sites, which was intended to reduce per-port costs by distributing fixed site costs over more charging ports. However, many property owners were unwilling to commit ten parking spaces to EV charging and were unable to participate in the PYD Pilot. As a result, SDG&E lowered the minimum size for MUDs to five ports which allowed many more MUDs to participate, but contributed to higher per-port costs.

Through interview discussions with the Company, as the PYD Pilot program progressed, the Company noted that it became more knowledgeable in regards to the importance of site selection in determining the extent of effort and costs to develop the site. Many of the costs to deploy a site are related to the characteristics of the site. Further, the Company was concerned with having enough interested, qualified participants. As a result, individual sites were selected for the program based on the order in which they applied, not based on the feasibility of the site. We were informed that as the program progressed this learning was integrated into the process and the criteria to select sites began to include the complexity and ultimate cost of the site such that more cost efficient sites would be prioritized.

During the PYD Pilot program, the Company identified the following characteristics of certain sites that led to higher costs:

- Longer overall distances from the power source to the EVSE,
- Multiple floors in parking garages leading to possible concrete core drilling between floors, longer distances to the power source, and higher costs to ensure structural stability,
- Smaller site sizes leading to higher average costs per port,
- Deeded parking spaces leading to longer conduit runs as chargers may be in different locations instead of contiguous, and
- Higher costs for the new electric service due to specific site conditions.

The Company was able to gather data during the PYD Pilot on the most cost effective ratio of number of ports per site and the most cost effective site specific characteristics that make sites more viable. These lessons learned can be utilized while performing site selection for the PYD2 program similar to what was done in the later stages of the Pilot. In particular, the Company informed us of its intentions to evaluate larger pools of applicants prospectively and select sites that will be more cost effective while meeting agreed upon targets. In addition, the Company has noted in our interviews that during PYD2, it is their intention to batch sites together based on geography and nature. Contractors will then bid on the batch to improve efficiency in procuring components and completing the installation. The Company informed us that, in their experience from the PYD Pilot, that batching such sites for bidding resulted in overall lower costs compared to individual sites being issued for bid. Further, the Company informed us that for the PYD2 program SDG&E plans to mitigate future cost risks via an improved stage gate process to select sites that are viable and cost effective. The stage gate process includes a “Go/No-Go” decision at early stages of the application and site acquisition process as well as the field review and customer approval process to better assess site feasibility and preliminary cost estimates prior to deciding to move forward with a site, minimize design revisions, and reduce potential redesign costs during the later stages of the project. Under the improved stage gate process, sites are not officially approved for the program until post-site walk/field review.

### **5.1.3 Company’s review of budget vs. actual financial results**

PwC obtained and reviewed the “Flash Reports” prepared by the Company to monitor budget vs. actual financial results during the execution of the PYD Pilot program. PwC determined that the “Flash Reports” lacked sufficient detail to ascertain specific cost drivers and/or cost categories (i.e., materials, labor, etc.) that specifically impacted the magnitude of the PYD Pilot cost overruns. We also obtained some of the underlying detail of these “Flash Reports” which provided an estimate vs actual cost comparison by site. The “Flash Reports”, including the underlying support, also lacked detail of the Company’s assessment or explanation for the cause of the overrun. The Company did not provide a detailed analysis by cost type of the budget vs. actual financial results with root causes for variances identified. Additionally, as mentioned before, due to the passage of time, PwC has been unable to verify or validate what, if any, procedures were performed by reviewers over the budget to actuals to address and resolve overruns.

Further, during our interviews with the Company, it was noted that appropriate monitoring of PYD Pilot costs was further complicated through an erroneous decision to allocate a portion of PYD Pilot costs to FERC jurisdictional assets during the initial setup phase of the program. Based on this decision, the accounting system was set up to charge certain costs to accounts that allocated a portion of the cost to FERC which the Company subsequently determined was in error. For PYD Pilot budgeting purposes, the costs incurred and allocated to FERC were then presumed to be recoverable through FERC rates through the Company’s transmission revenue requirement and were, therefore, excluded from the monitoring of CPUC recoverable costs when comparing to the \$45 million budget approved within the Decision. Ultimately, this misallocation of PYD Pilot costs to FERC resulted in an understatement of total project costs within the budget to actual analysis. This misallocation was identified by the Company in 2019 and corrected. Prior to the identification of the misallocation, the estimated-at-completion costs for the PYD Pilot program appeared to be



tracking with the CPUC approved budget of \$45 million. Once PYD Pilot costs that were inappropriately allocated to FERC were appropriately added into the total program costs, the project had already exceeded the total approved budget and the Pilot was near completion. The end result is that the budget to actual financial analysis likely did not receive the level of scrutiny it should have if the Company had been aware it was trending over the CPUC approved budget of \$45 million.

Ultimately we observed two breakdowns in the Company's system of controls in this area. First, the project set up was not appropriately reviewed to ensure that costs were mapped to the appropriate jurisdictional accounts. Second, the budget to actual review of financial results was not appropriately designed and/or executed. In particular, the original budget was not established at a sufficiently granular level, the explanations for budget to actual variances were not clear on the reasons for such variances, and we were not provided evidence of discussions of the budget to actual that would indicate what actions the Company considered or took as a result of the observed actual results.

#### **5.1.4 Company's management of third-party vendors**

As noted in the Background section above, the Company engaged multiple third-party vendors to assist with the PYD Pilot program. A single contractor, the Program Management Vendor, was engaged to support many aspects of the project, including project management, customer outreach and tracking, site engineering and design, and construction oversight. These functions were given to a contractor as SDG&E did not believe it had enough internal resources with appropriate expertise. The initial Program Management Vendor contract was for \$1.8 million. Subsequent requisitions made by the Program Management Vendor requested an increase of the contracted amount to a total of \$12.5 million in order to complete their services, which would have been 28% of the total available project budget of \$45 million. The Company paid out approximately \$6.5 million under the contract before terminating the agreement. The Company noted in our discussions that the Program Management Vendor was delayed in its invoicing to the Company and did not provide the level of transparency the Company needed to oversee the actions of the Program Management Vendor. As a result, this overrun of the original contract amount was not detected and not remediated by the Company timely. We note this is a lapse in the Company's controls over third-party vendor oversight and proper accruing for costs.

In January 2018, the Company initiated a self-review and a coinciding audit, performed by the Company's Internal Audit department, over the Company's monitoring and oversight of vendors utilized during the PYD Pilot program. The audit report was issued in May 2018. Internal Audit's report had two primary findings. First, Internal Audit identified various issues directly with the Program Management Vendor, including exceeding their PO spending limit without any approved amendments, lack of granularity in the vendor invoices, significant delays in invoicing, and potential lack of oversight of subcontractors. Further, issues were also identified that bring into question the quality of the Company's controls over the procurement of third party vendors. The Company's Procurement Policy states that competitive bidding should be used for supply management commitments over \$75,000. Additionally, Single or Sole Sourced exceptions must be documented within the purchase requisition with appropriate business rationale leading to the decision. The Program Management Vendor was given a large contract to support several aspects of the project without going through competitive bidding. Sole Source Justification (SSJ) for the contractor was based on time constraints of the project, the vendor had prior direct experience with SDG&E, and was believed to have the necessary skill sets for the program's success. Based on research performed by the Company's Internal Audit department, several items regarding the Program Management Vendor's qualifications were noted which should have been identified as part of the procurement process.

As a result of the self-review by SDG&E and audit procedures performed by the Company's Internal Audit department, SDG&E terminated its contract with the Program Management Vendor in March 2018 and transitioned the PYD program to an internal department to improve efficiencies and oversight. The Program Management Vendor had significant cost overruns that were not identified timely by SDG&E and SDG&E's controls over the procurement of third party vendors

did not operate effectively to ensure that the Program Management Vendor was a reputable and qualified vendor. Based on our inquiries with the Company and review of the Internal Audit report, it appears that the Program Management Vendor incurred approximately 3.6 times the initial contract amount before internal audit's report led to the termination of that arrangement. The Company has asserted to us that they initiated an extensive review of the validity and appropriateness of costs submitted by the Program Management Vendor by SDG&E's Major Projects invoicing team subsequent to the termination of the Program Management Vendor. This review included discussions with upper management and the legal department who ultimately approved the payment to the Program Management Vendor for all amounts due under the contract. However, PwC did not review evidence of this process. Further, PwC was unable to ascertain the cost impact to the program pre- and post- use of the Program Management Vendor to substantiate whether the program was more or less efficient after transitioning to an internal department. We have inquired of the Company and they informed us that they do not believe that the Program Management Vendor was a significant contributor to the budget overruns noted. However, PwC cannot speak to whether the cost overruns by the Program Management Vendor would have been incurred internally if the vendor had been properly monitored and the decision to terminate the Program Management Vendor had been made in a timely manner. The Company did not provide evidence that any procedures were performed to assess the root cause of the procurement issues with the Program Management Vendor.

The Company informed us that going forward, similar programs will be managed by the Company's internal Clean Transportation group which has incorporated the practices of the Company's internal Major Projects group that also oversees traditional utility construction programs. This group has standard practices and controls to manage large projects.

#### **5.1.5 Company employee turnover**

During our Assessment, the Company provided us a listing of individuals involved with the PYD Pilot noting those individuals who had either left the Company or changed roles along with the individual who currently fulfills the role. Based on this listing and the discussions with these individuals, PwC noted that the Company experienced a significant amount of turnover of key individuals that were involved with the PYD Pilot program. We observe that the Company did not have a formal process to properly transition roles and responsibilities in an appropriate manner and, as a result, affected the Company's ability to manage the program as a whole due to a lack of consistency of involvement from key individuals throughout the entirety of the program. Further, during the life of the program, program management responsibilities were reassigned multiple times. As noted above, program management functions were initially outsourced to the Program Management Vendor and were later transitioned to internal Company resources within the Major Projects group. Subsequent to the completion of the Pilot, these responsibilities have transitioned to the Clean Transportation group. Further individuals within these groups turned over several times during the Pilot phase and through today. As noted above, this turnover inhibited our ability to understand the root causes of budget overruns.

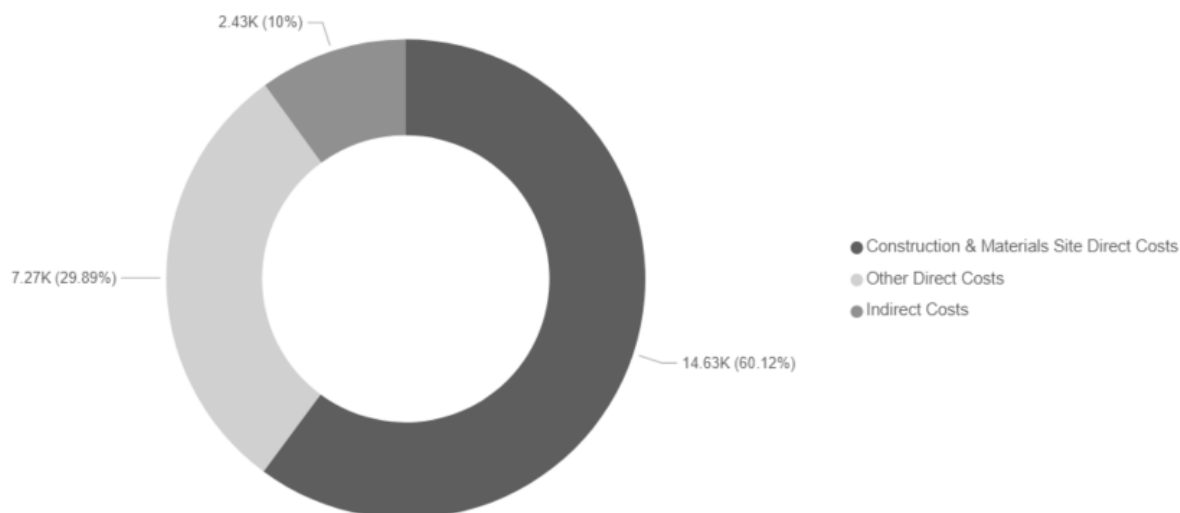
The Company has informed us that in 2021, SDG&E established a Compliance Council, led by the Chief Compliance Officer, and attended by certain officers, including the President and General Council, and other leaders. The intent of this council is to meet with new directors, and directors new in their roles, to discuss primary compliance challenges and actual or potential solutions. Additionally, SDG&E has informed us that it has developed "Expectations for Leadership" compliance training for all directors and managers (both initial and annual refresher training). The initial training is comprised of three 90-minute sessions, and includes the following topics: (i) approvals; (ii) due diligence; (iii) third-party management; (iv) psychological safety; (v) ownership of company objectives; and (vi) Sempra's Code of Conduct. In 2022, SDG&E indicated that it intends to also provide all supervisors with this training. Going forward, as employees are promoted into a supervisor, manager, or director role, they will receive this training. Finally, in 2022, SDG&E also indicated that it intends to create and deliver fundamental, universal program and project management training; this training will be delivered on a company-wide basis to program and project management personnel, respectively.

#### **5.1.5 PwC benchmarking**

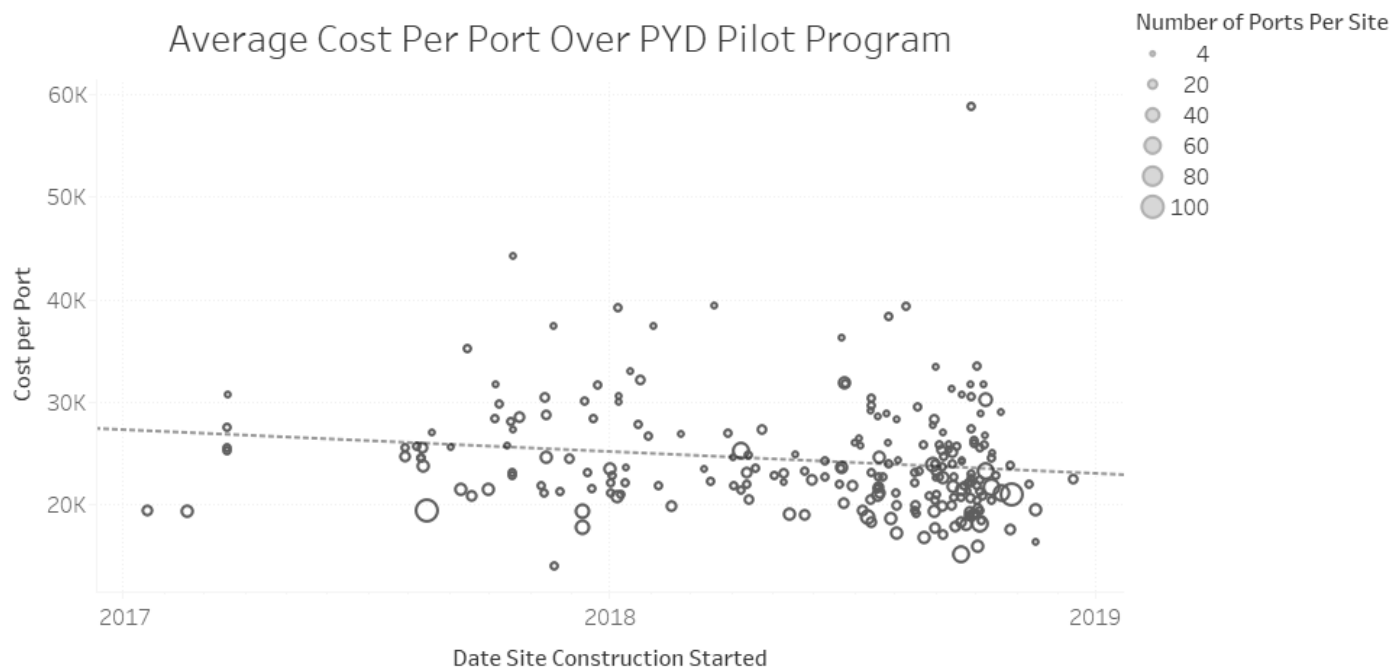
PwC notes that the primary metric in determining the efficiency of the PYD Pilot program was "cost per port". Based on review of site level data provided by the Company, SDG&E incurred an average cost per port (including direct and

indirect costs) of approximately \$24,000. Average direct construction and material costs across the Company's sites were approximately \$15,000, while other costs (labor, IT, etc.) were approximately \$7,000. The remaining buildup of the \$24,000 is related to other indirect costs. Further analysis of the site level detail indicates that the average construction cost per port decreased \$1,700 on average over the course of the project, consistent with the Company's assertions that construction efficiencies were found as the Pilot progressed. The Company notes that there were not substantial differences in cost per port at the disadvantaged community sites constructed. PwC's review of the Company's data supports this assertion.

## Average Cost Per Port

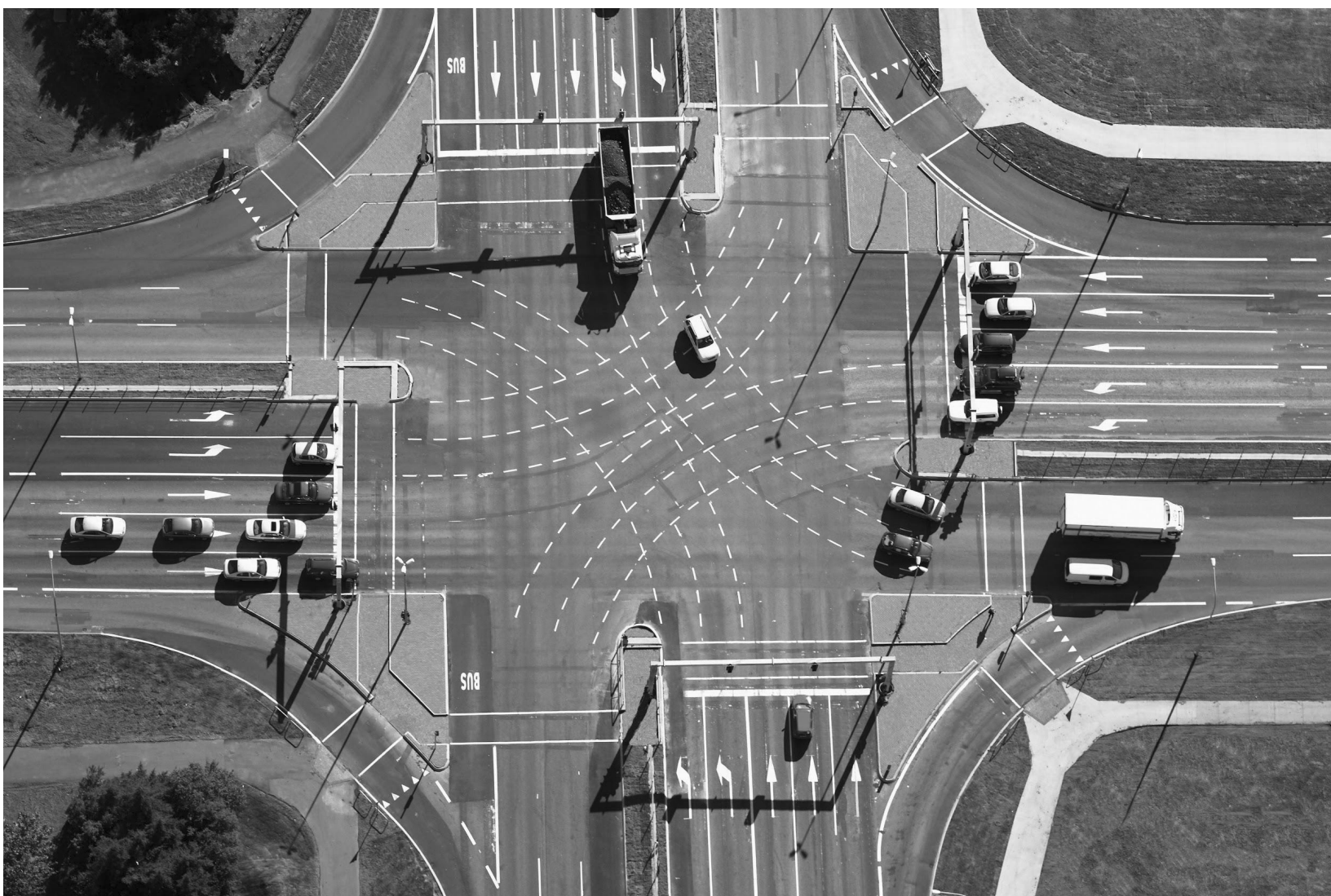


## Average Cost Per Port Over PYD Pilot Program



PwC attempted to benchmark the results of the PYD Pilot program by evaluating regulatory dockets for EV charger programs filed by utility companies throughout the United States against the cost per port data detailed above. PwC

notes that the benchmarking process was inherently limited in scope as the majority of EV charger programs were structured as rebate programs as opposed to a company constructed and owned charger program. In these rebate based programs, the customer often bears a portion of the make ready costs and has exposure to cost variances. Due to the nature of the programs, PwC notes that rebate programs have inherently lower cost per port than the construction program performed for PYD Pilot. While other California utilities performed similar construction programs, discussions with interviewees indicated that direct comparisons between the utilities may not be meaningful due to differences in how costs were collected and demographic differences. SDG&E noted that the Company is currently working with Southern California Edison and Pacific Gas & Electric to develop a valid comparison; however, such data was not made available to PwC as this process is currently on-going at the time of this report and the release of such data would be dependent on approval of the other California utilities which did not grant such approval. Please refer to Appendix C for a summary of results from our benchmarking exercise.



# 6. Observations and recommendations

## 6.1 Observations

As a result of our Assessment in section 5 above, we have summarized our observations below:

1. Upon accepting the CPUC's budget for the Pilot, the Company recognized that it would be challenging to complete the program within the approved amount. As noted above, the number of sites/ports was reduced as part of the discussion with the CPUC, but the Company believes this did not appropriately consider the amount of fixed costs that would be unchanged by the change in number of sites/ports. We did not observe evidence that this was an identified risk of the program and, as a result, there appeared to be no mitigation strategy for this risk. Further, while the Company did provide semi-annual reporting to the CPUC, it appears that the cost overruns were not highlighted by any party such that the reasons could be discussed contemporaneously.
2. The Company was not able to fully capture the complexity of an EV charger program when establishing a budget for the PYD Pilot program leading to higher than expected costs. Given that this program was among the first of its kind, this was not unreasonable; however, we were not able to identify what steps the Company took to mitigate this risk both in the initial budgeting and then in the subsequent management of actual incurred costs. We do note that the Company's original budget contained a contingency factor; however, given the CPUC Decision to reduce the budget, that Contingency ultimately was not sufficient and the budgeting process was not subsequently adjusted to account for this risk. Nevertheless, the Company gained an improved understanding of the importance of proper site selections and the impacts of site selection on the cost effectiveness of site projects during the PYD Pilot program that can be applied to the PYD2 program. The Company plans to batch sites together when bidding sites to future contractors which should improve efficiencies and reduce costs.
3. The Company did not have sufficient financial controls in place to have a sufficiently granular budget nor have the processes to adequately monitor the PYD Pilot costs during the duration of the program. In particular, we observed that the budget-to-actual process did not have appropriate analysis of reasons for cost overruns and proposed changes to processes to mitigate these cost overruns. We also observed that certain cost categories (e.g., IT testing and vendor qualification) were not included in the budget indicating weaknesses in the budgeting process.
4. Project set up review did not detect the erroneous allocation of project costs to FERC indicating a weakness in the project set up process.
5. The Company's management of third-party vendors utilized during the PYD Pilot program lacked proper oversight as evidenced by the lack of transparency of the Program Management Vendor's costs and activities.
6. The Company's cost accrual process was inhibited by the lack of transparency from the Program Management Vendor which also impacted the Company's ability to monitor the budget. This risk was not mitigated by the Company timely.
7. Based on the Company's Internal Audit report, it appears that the approval to award the contract to the Program Management Vendor did not consider several important factors including the lack of experience of the Program Management Vendor.
8. Significant turnover of key employees and multiple transitions of ownership of the program management function inhibited the Company's ability to properly manage the PYD Pilot program. Further, the Company lacked appropriate change management controls to mitigate the turnover risk and/or identify and remediate such risks.
9. As noted in this report, we were informed of several instances where the Company, both during the Pilot and after, learned based on their experiences with the Pilot and made improvements to their processes.

## 6.2 Recommendations and Other Considerations

Based on the observations noted above, we recommend the following:

1. It appears that the Company accepted the CPUC's budget for the Pilot while acknowledging there was significant risk with the ability to meet that budget. In future cases, the Company should either not accept the program or identify the risk and develop an appropriate mitigation plan that may include regular communication with the CPUC and/or Staff regarding the status and the plans for any cost overruns or other issues identified during the program.
2. Implement specific risk management protocols for projects that are unique or new such as specific risk metrics, risk inventory with mitigation plan, contingency planning, feedback process with the CPUC and other appropriate procedures.
3. Utilize the knowledge gained over the importance of site selection on the cost effectiveness of the site project. The Company has indicated that there is sufficient demand for the second phase of the program that will allow the Company to be more selective with which sites they determine are a good fit for the program and will be cost effective. Further, the Company's planned approach to batch certain sites together for contracting and execution appears to be a helpful improvement.
4. Enhance the Company's internal controls process. In particular:
  - a) The Company would benefit from improving controls over preparing and reviewing budget to actual financial analysis. The Company should focus on creating a granular budget at the inception of a project which agrees to CPUC authorized amounts and includes appropriate contingency for potential risks. Further the Company should perform regular comparisons between the budget and actuals as the project is in progress, establishing thresholds for which variances would require further investigation, and properly investigating and communicating variances over the established thresholds to the appropriate levels of leadership in order for decisions to be made in a timely manner (including how the variance can be mitigated or other actions that should be taken). The results of these discussions should be documented and retained. The Company should also evaluate any deficiencies in its accrual process to ensure actual cost reporting is as accurate as possible based on work performed to date;
  - b) Based upon the issues noted with the Program Management Vendor, the Company would benefit from improving controls over the approval of third party vendors. The Company should focus on ensuring that employees understand and adhere to the Company's Procurement Policy by performing the appropriate due diligence on third party vendors to verify that they are reputable and qualified especially when an exception to the requirement of competitive bidding is sought. Ensure proper supervision of third-party vendors on future projects through improved standard processes and controls including required steps when approved requisition levels are or are projected to be exceeded and standard protocols for information sharing with third parties; and
  - c) The Company should evaluate its project set up controls to determine the root cause of the error that resulted in costs being incorrectly allocated to FERC and make appropriate changes.
5. Develop a plan for key stakeholder turnover that will allow for appropriate knowledge transfer and key data retention. During PYD2, the Company should also seek to minimize turnover in key roles.
6. Agree on a standard presentation for cost per port with the CPUC to provide a comparable benchmark between other utility companies within the CPUC's jurisdiction.

Additionally, the Company provided the below table which describes additional lessons learned from the PYD Pilot program and how these lessons learned influenced their cost estimates for the PYD extension program.

Program Phase/Cost Category	Lessons Learned from PYD Pilot	PYD Extension Cost and Schedule Assumptions
Customer Acquisition & Site Selection	Allow for adequate timelines to complete site walk-throughs, evaluation process, and negotiations of easements and site agreements.	Additional time allocated for site selection process at the beginning of the program prior to commencing construction activities. SDG&E also identified potential customers/sites that have expressed interest in PYD, which has potential to save on outreach, education, and marketing costs. Leverage SDG&E experience involved in site acquisition and sales process during PYD Pilot for Extension Program.
Engineering Design	Leverage program engineering design process from later stages of PYD Pilot and minimize design costs during site selection and walk-through process.	FEED (Front End Engineering Design) costs of \$200K included in PYD Extension estimate for upfront site evaluation support to reduce potential redesign costs during later stages of the program. Maintain efficiencies gained for third party engineering design by reducing the number of sites that need parallel design and site selection activities.
Program Management	Optimize program execution by utilizing SDG&E resources for program management.	Unlike PYD Pilot, no third-party program management support is included in the PYD extension estimate.
Construction	Construction contractor costs for single site bids usually came in higher than bundled site bids.	Multiple IFC-ready (issued for construction) sites are awarded to third party construction contractors at one time, which reduces risk to contractors and allows for more consistent scheduling and resource planning.
Site Commissioning & Close-out	EVSE commissioning process and validation of data is complex and needs appropriate applications and staffing support.	Estimate does not include application build-out costs for billing system integration since these costs were incurred during the PYD Pilot program. Maintains resources needed for site commissioning and billing setup as well as additional resources for rebate administration that were not part of initial PYD Pilot program.

# Appendices

**Appendix A – Key company employees involved in PYD Pilot Program**

**Appendix B – Example of Company’s “Flash Report”**

**Appendix C - PwC EV Charger Program Benchmarking Results**



## Appendix A – Key company employees involved in PYD Pilot Program

Title	Description of Role in the Pilot	Interviewed by PwC?
Senior Vice President – Electric	Executive overseeing Clean Transportation – development of PYD Pilot	No (retired)
Vice President	Executive overseeing Clean Transportation – development and implementation of PYD Pilot	Yes
Director, Major Projects	Oversaw Major Projects department and development of programs	Yes
Director – Smart Grid	Oversaw initial development of PYD concept; Responsible for strategy, direction, policy, and implement for clean transportation efforts	No (no longer with the Company)
Director – Clean Transportation	Oversaw Clean Transportation department and development of programs	No (no longer with the Company)
Sr. Director – Clean Transportation	Oversaw Clean Transportation department and development of programs	No (no longer with the Company)
Director – Clean Transportation	Oversaw Clean Transportation department and development of programs	Yes
Director – Clean Transportation	Oversaw Clean Transportation department and development of programs	Yes
Manager	Project lead and settlement co-lead	No (retired)
Project Manager	Technical advisor and project manager supporting electric transportation efforts	No (retired)
Project Manger	Project manager supporting electric transportation efforts	Yes
Regulatory Case Manager/CT Business Development Manager	Regulatory case manager of proceeding; joined Clean Transportation department during implementation	No (no longer with the Company)
Manager – Regulatory Relations	Settlement co-lead and regulatory lobbyist	Yes
Clean Transportation Program Manager	Program Manager during Regulatory Proceedings & Program Implementation 2016-2017	Yes
Clean Transportation Program Manager	Program Manager during Program Execution 2017	No (no longer with the Company)
Clean Transportation Program Manager	Program Manager during Program Execution & Closeout 2017-2018	Yes
IT Program Manager	IT Program Manager 2016-2018	Yes
Cust Ops Program Manager	Customer Operations Program Manager 2016-2018	Yes
Clean Transportation Business Development Manager	Business development for Pilot program	No (no longer with the Company)
Clean Transportation Policy Manager	Policy Manager for Pilot program	No (no longer with the Company)
Clean Transportation Policy Manager	Policy Manager for Pilot program	Yes
Financial Analysis Project Manager	Financial analysis and planning for clean transportation projects	No (retired)
Project Controls Lead	Monthly outlooks and budget updates	Yes
Clean Transportation Programs Manager	Oversee project management and construction after close out of pilot	Yes
VP, Audit Services	Assisted with Audit Services audit of Pilot program	Yes
Director, Audit Services	Assisted with Audit Services audit of Pilot program	Yes
Principal Auditor	Assisted with Audit Services audit of Pilot program	Yes

## Appendix B – Example of Company’s “Flash Report”

Dec 2018

Power Your Drive Pilot

### Flash Report

	Actual Costs w/o AFUDC	2018 Q3 Corporate Outlook	Variance	Sites	Nozzles
Dec 2018	\$6,626,642	\$2,152,969	\$4,473,674	101	1283
Dec 2018 YTD	\$41,511,564	\$36,784,882	\$4,726,682	220	2613
Dec 2018 PTD	\$55,836,024	\$51,109,342	\$4,726,682	238	2818

	Total PTD Costs	Authorized Funding	Percent Spent		
CapEx	\$55,836,024	\$35,960,308	155%		
AFUDC	\$1,346,119	\$6,870,497	20%		
<b>CapEx Total</b>	<b>\$57,182,144</b>	<b>\$42,830,805</b>	<b>134%</b>		
O & M	\$1,764,218	\$1,000,000	176%		
<b>Total Costs</b>	<b>\$58,946,362</b>	<b>\$43,830,805</b>	<b>134%</b>	<b>300 to 350</b>	<b>3000 to 3600</b>

#### Comments

The December monthly and YTD variances were primarily driven by increased construction cost based on the scheduled ramp-up at year-end. The project team completed 1,283 nozzles in the month of December compared to a plan of 231 nozzles in the Q3 2018 Corporate Outlook. As of December 2018, -210 sites with -2,400 nozzles have been energized within SAP (compared to 238 sites and 2,818 nozzles completed, as noted above).

Please note: the costs above do not include -\$7.7 million for a December accrual posted at the company level or any costs related to the Enterprise IT budget or 184.6 transformers.

## Appendix C – PwC EV Charger Program Benchmarking Exercise

Jurisdiction	Company	Summary of EV Charger Program
Michigan	DTE Energy (DTE)	<p>In 2019, DTE was approved for a three-year, \$13 million EV pilot, Charging Forward. Through the program, DTE offers rebates that fund the EV supply infrastructure and charging stations for business and commercial electric customers:</p> <p>Level 2 stations receive \$2,500 per port</p> <ul style="list-style-type: none"> <li>- Minimum of two ports per site to ensure charging availability</li> <li>- Maximum of 20 port rebates per site to spread charging across DTE service territory</li> <li>- Maximum of 100 port rebates per business or commercial customer to ensure funding is dispersed</li> </ul> <p>Direct-Current Fast Charger (DCFC) stations receive up to \$55,000 per charger</p> <ul style="list-style-type: none"> <li>- Minimum of two chargers per site to ensure charging availability</li> </ul>
New Jersey	Atlantic City Electric Company (ACE)	<p>In 2021, ACE was approved for a five-year, \$20.7 million EV program to incentivize off-peak charging of EVs, develop EV infrastructure, and provide grants to foster innovation in electrifying the transportation sector. The program consists of the following offerings designed to accelerate EV adoption in New Jersey:</p> <ul style="list-style-type: none"> <li>-Multi-Family Level 2 stations: Incentives to cover 75% of make-ready costs up to \$5,000 per smart charging port at multi-family dwellings</li> <li>-Workplace Level 2 stations: Incentives to cover 50% of make-ready costs up to \$4,500 per smart charging port at workplace facilities</li> </ul>
Ohio	American Electric Power (AEP)	<p>In 2018, AEP Ohio was approved for a six-year, \$10 million EV program to promote EV charging market development on a competitively neutral basis. Through the program, AEP Ohio was approved to create and operate a rebate incentive program for the hardware, network services, and installation of charging infrastructure for up to 300 level 2 charging stations:</p> <ul style="list-style-type: none"> <li>-Workplace Charging: Incentives for Level 2 Chargers — Maximum of 6 ports per customer for the lesser of \$30,000, 50% eligible project costs, or \$5,000 per port.</li> <li>-Multifamily Complex: Incentives for Level 2 Chargers — Maximum of 6 ports per customer for the lesser of \$45,000, 75% eligible project costs, or \$7,500 per port.</li> </ul>
Washington, D.C.	Potomac Electric Power Company (Pepco)	<p>In 2019, Pepco was approved for a six-year EV smart program in a commitment to support the District of Columbia's clean energy and sustainability goals. Through the program, Pepco will provide make-ready infrastructure for Level 2 smart chargers and DCFCs.</p> <ul style="list-style-type: none"> <li>-Public Charging: Pepco will provide make-ready infrastructure for up to 35 Level 2 smart chargers for a total budget of \$263,000.</li> <li>-Public Charging: Pepco will provide make-ready infrastructure for up to 20 DCFCs for a total budget of \$1.65 million.</li> </ul> <p>These approved budgets do not include O&amp;M or indirect charges.</p>

Jurisdiction	Company	Summary of EV Charger Program
Maryland		In 2019, the state of Maryland implemented a statewide EV Portfolio that would facilitate EV ownership and use through increasing available EV tariff offerings, providing for utility infrastructure investment in EV charging, and offering customer assistance regarding EV usage for Maryland's four electric investor-owned utilities —BGE, Delmarva, PE, and Pepco.
	Baltimore Gas and Electric Company (BGE)	Multi-unit Dwelling Rebate Program - BGE will be rebating up to 700 non-residential customers 50% of the total cost of EV chargers and installation up to \$5,000 for L2s and \$15,000 for DCFCs, with a maximum rebate of \$25,000 per eligible site.
	Delmarva Power & Light Company (Delmarva)	Multi-unit Dwelling Rebate Program - Delmarva will offer non-residential customers up to two discounted L2 EV Smart Chargers per site (with up to two ports per EV charger at the discretion of the property owner) and a one time discounted installation cost at a premise for 50 customer subscriptions that must share EV charging data. Delmarva's estimated cost for the non-residential rebate program is \$595,000.
	The Potomac Edison Company (PE)	Multi-unit Dwelling Rebate Program - PE will offer 50 rebates of 50% of the cost of the equipment and installation up to \$5,000 each to MUD customers who install eligible L2 or DCFC.
	Potomac Electric Power Company (Pepco)	Multi-unit Dwelling Rebate Program - Pepco will offer non-residential customers up to two discounted L2 EV Smart Chargers per site (with up to two ports per EV charger at the discretion of the property owner) and a discounted one time installation cost at a MUD premise for 200 customers. Pepco's estimated cost for the non-residential rebate program is \$2.4 million.

\*PwC compiled the above data from commission issued orders within the respective jurisdictions. The data is not representative of the entirety of the EV charger programs within these commission issued orders, but is meant to highlight offerings within the programs that are similar to the offerings SDG&E provided through the PYD Pilot program.

**Observation:** PwC notes that the benchmarking process was inherently limited in scope as the majority of EV charger programs were structured as rebate programs as opposed to a company constructed and owned charger program. Due to the nature of the programs, PwC notes that rebate programs have inherently lower cost per port than the construction program performed for PYD Pilot.



# Thank you

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